

**REMARKS**

**Summary Of The Office Action & Formalities**

The Applicant has authorized the law firm of Sughrue Mion, PLLC and undersigned attorney to file this response. The Applicant will prepare and submit the appropriate Power of Attorney shortly.

Claims 1 and 2 are all the claims pending in the application. By this Amendment, Applicant is canceling claims 1 and 2, and adding new claims 3-22. No new matter is added.

Submitted herewith is a Petition for Extension of Time with fee.

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

Applicant also thanks the Examiner for initialing some of the references listed on form PTO-1449 submitted with the Information Disclosure Statement filed on June 26, 2001. With respect to the two foreign references that have not been initialed, Applicant notes that these references were cited in the International Search Report (“ISR”) for the PCT application from which this application entered the national stage. Under USPTO patent practice, the Examiner is required to consider such references, and, if listed in the proper format in an information disclosure statement, initial the references so that they appear on the issued patent. For the Examiner’s convenience, Applicant is submitting herewith the ISR from the PCT application. The Examiner is now kindly requested to initial to two foreign references that were previously stricken through.

The drawings are objected to for the reasons stated at pages 2 and 3 of the Office Action. Applicant is submitting a replacement drawing sheet that corrects the cross-hatching. The Examiner has suggested including a plan view of the printed circuit board. Applicant appreciates the Examiner's suggestions, but believes that one skilled in the art would not require additional views in order to fully understand the disclosed invention. Moreover, the figures do illustrate the widening of the conducting track. For example, Fig. 4, the track is widened to extend below the electrical part 13.1.

The specification is objected to for various reasons set forth at pages 3-5 of the Office Action. Applicant is amending the specification to overcome those objections.

Claims 1 and 2 are rejected under 35 U.S.C. § 112, first and second paragraphs, for the reason set forth at pages 6-9 of the Office Action. Applicant is canceling claims 1 and 2 and adding new claims to overcome this rejection.

The prior art rejections are summarized as follows:

1. Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ohsawa (USP 4,339,785).

Applicant respectfully traverses.

**Claim Rejections - 35 U.S.C. § 102**

1. *Claims 1 And 2 In View Of Ohsawa (USP 4,339,785).*

In rejecting claims 1 and 2 in view of Ohsawa (USP 4,339,785), the grounds of rejection state:

**Regarding claim 1,** Ohsawa discloses a printed circuit board (element 6, figure 1) with a conductive track (element 7 and

8, figure 1 and 2) having pads (element 7a and 7b, figure 1 and 1) formed on the surface of the board,

an electronic component (element 5, figure 1) mounted on the board,

an adhesive (element 13, figure 1) disposed on the board attaching the component to the board, and

electrodes (element 2 and 3, figure 1) of the component soldered (solder 14, 15, figure 1) to the pads on the tracks.

**Regarding claim 2**, Ohsawa further discloses the wider pads (element 7a-8a, figure 2).

Office Action at page 10.

New claims 3-22 recite features that are neither taught nor suggested by Ohsawa.

In particular, new claim 3 recites a circuit in which “the first conducting track extends beyond the first conducting part to a position under the electrical part.” In Ohsawa, the lands 7a and 8a do not extend beyond the caps 2 and 3.

New claim 14 recites a circuit having “an adhesive on the first conducting track, the adhesive adhering the electrical component to the first conducting track.” In Ohsawa, the adhesive is not on either land 7a or 8a.

New claim 21 recites a circuit in which “the first conducting track comprises a pad extending from a side of the first conducting track facing the opening, and an adhesive on the pad, the adhesive adhering the electrical component to the first conducting track. In Ohsawa, there is no such extension of either land 7a or 8a.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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23373  
CUSTOMER NUMBER

Date: September 7, 2004

Substitute for Form 1449 A & B/PTO		Complete if Known	
		Application Number	09/762,297
		Confirmation Number	4777
		Filing Date	March 26, 2001
		First Named Inventor	Joan Maria BOIXADERA FERRER
		Art Unit	2827
		Examiner Name	Ishwarbhai B. PATEL
		Attorney Docket Number	Q82685
Sheet	1	of	1

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		Patent Abstracts of Japan, JP 62-134194 A (MITSUBISHI ELECTRIC CORP), June 17, 1987	

**Examiner Signature** \_\_\_\_\_ **Date Considered** \_\_\_\_\_

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.

# PATENT ABSTRACTS OF JAPAN

(11) Publication number : 62-134194

(43) Date of publication of application : 17.06.1987

(51) Int.CI.

B23K 35/22  
H05K 3/34

(21) Application number : 60-272973

(71) Applicant : MITSUBISHI ELECTRIC CORP

(22) Date of filing : 04.12.1985

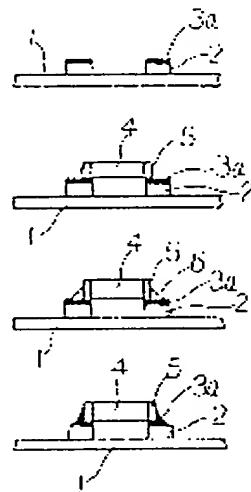
(72) Inventor : HAMADA MASAKAZU

## (54) CREAMY SOLDER

### (57) Abstract:

PURPOSE: To prevent that the terminal of the component fitted while under transfer of a printed circuit board is moved from the adhesion position by coating an adhesive material on the printed circuit board by mixing it in a creamy solder and by fitting the component thereto.

CONSTITUTION: An adhesive material 6 is mixed in the creamy solder 3a which is made creamy by mixing a powder like solder with the flux of high viscosity. For the adhesive material 6 those which cure in a fixed period after coating or cure at = a certain temp. are used. A component 4 is fitted to a printed circuit board 1 at the component fitting stage by coating this creamy solder 3a by printing it on the surface of the electric conductor 2 of the printed circuit board 1. The adhesive material 6 is hardened by leaving it to chance or by cooling according to the curing conditions of the mixed adhesive material 6 and the terminal 5 of the component 4 is fixed to the surface of the conductor 2. The component 4 is then fixed by soldering it on the printed circuit board 1 by fixing the creamy solder 3a by its cooling with its melting by heating by transferring to the reflow soldering stage. In this case the adhesive material 6 is flowed out of the solder joining part with its melt by heating and no effect on soldering.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT ES 00/00151

## A. CLASSIFICATION OF SUBJECT MATTER:

IPC 7 H05K3/34

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H05K3/34, 3/30, 3/40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI, EPODOC, PAJ, CIBEPAT.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0509262 A2 (THE FURUKAWA ELECTRIC CO, LTD) 21 October 1992 (21.10.92); the whole document	1,2
A	DE 3328342 A (ROBERT BOSCH GMBH) 03 January 1985 (03.01.85) the whole document	1,2
A	PATENT ABSTRACTS OF JAPAN; CD-ROM, PAJ B23 1987-1993 (2/2), JP 62134194 A (MITSUBISHI ELECTRIC CORP.) 17 June 1987 (17.06.87).	1,2
A	US 5363277 A (TANAKA) 08 November 1994 (08.11.94); the whole document	1,2
A	EP 0821408 A2 (SHARP KABUSHIKI KAISHA) 28 January 1998 (28.01.98); the whole document	1,2
A	US 5271548 A (MAIWALD) 21 December 1993 (21.12.93); the whole document	1,2



Further documents are listed in the continuation of Box C.



See patent family annex.

- Special categories of cited documents:
  - “A” document defining the general state of the art which is not considered to be of particular relevance
  - “E” earlier document but published on or after the international filing date
  - “L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  - “O” document referring to an oral disclosure, use, exhibition or other means
  - “P” document published prior to the international filing date but later than the priority date claimed

- “T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- “X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- “Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- “&” document member of the same patent family

Date of the actual completion of the international search  
21 June 2000 (21.06.00)

Date of mailing of the international search report  
30 June 2000 (30.06.00)

Name and mailing address of the ISA/

S.P.T.O  
Facsimile No.

Authorized officer

Telephone No.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International Application No

PCT/ES 00/00151

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0509262 A2	21.10.1992	CA 2063682 AC CN 1065372 A CN 1034706B B JP 4297089 A JP 4297091 A BR 9201047 A US 5296649 A DE 69204516 D ES 2079713T T KR 9601352 B	27.09.1992 14.10.1992 23.04.1997 21.10.1992 21.10.1992 24.11.1992 22.03.1994 12.10.1995 16.01.1996 26.01.1996 04.04.1996
DE 3328342 A	03.01.1985	NONE	----
JP 62134194 A	17.06.1987	NONE	----
US 5363277 A	08.11.1994	DE 4243345 A JP 5175280 A	24.06.1993 13.07.1993
EP 0821408 A1	28.01.1998	JP 10041694 A CN 1175089 A US 6058021 A	13.02.1998 04.03.1998 02.05.2000
US 5271548 A	21.12.1993	DE 41266913 EP 0528350 AB DE 59208656D ES 2104778T T	18.02.1993 24.02.1993 07.08.1997 16.10.1997

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 09/762,297

Attorney Docket No.: Q82685

**AMENDMENTS TO THE DRAWINGS**

Sheet 1 of the drawing is amended to correct the cross-hatching.

Attachment: Replacement Sheet(s)